

SPORTS

CHESS

Lari Kasparov has won the final world championship challenge match in Vilnius, beating Vasily Smyslov 5-3. The match between world champion Anatoly Karpov and Kasparov will be held this year.

30-year-old Leningrader Lina Levitina has won the right to challenge her compatriot Maya Chiburdanidze's title of chess "queen". Their match will be held this year. Levitina has achieved this success by winning the final world championship challenge match in Sochi, beating Lidia Savynova from Kiev 3-5 after winning the 12th game.

The struggle was very keen. Levitina had a two-point advantage earlier but her rival managed to bridge the gap. Later, Levitina again took the lead 3.5-4.5, but the Kiev player threatened to tie up with her in the 11th game. Though close to success, she ultimately had to be contented with half a point. And then came her defeat in the final game.

Lina took up chess at the age of 10. She was a national junior champion, four-time adult champion, and was twice on the national teams which won world Olympiads. This is the third time she is fighting for the crown.

Viktor DASHIN,
chess observer



To the 'accompaniment' of spring flowers

The first "round" of the Olympic season for the Soviet figure skaters was the national championship in the capital of Uzbekistan, Tashkent. In this Central Asian republic, figure skating is a young sport, and the championship became a stimulus for its development.



Yelena Butarova and Alexei Solovov, winners of the national dancing title.
Photo by Mikhail Dushvuk

The local residents gave a warm welcome to the participants, whose performances were held to the "accompaniment" of spring flowers.

The top members of the national team did not take part in the championship, as they are now on a traditional foreign tour with an exhibition programme of the world's best skaters, now that the world championship in Ottawa is over. Still, the Tashkent competition aroused much interest as it determined those who will start the new four-year period among the chief candidates to the national team.

In the pairs, success came in 1984 Olympic bronze medalists Leningraders Larisa Selitsynova and Oleg Makarov. They had rough competition from Leningraders Yelena Bechka and Valery Komlyenko, who won their first bronze medal. They are the discoverers of the tournament.

The dances were confidently won by Muscovites Yelena Batanova and Alexei Solovov, who are coached by Olympic champion Lyudmila Pakhomova. Specialists have noted that they are entering their maturity. Vitaly Yegorov from Kharkov won the men's singles and Natalya Lobacheva from Sverdlovsk won the women's singles. They will be the chief rivals of the leaders in the new season.

PARREIRA GOES

Carlos Alberto Parreira, head coach of the Brazil's national football team, has declined to quit his post following the refusal by the country's football federation to meet his demand for higher wages.

The problem between the federation and Parreira is of a financial nature, stressed director of the Brazilian Federation Nelson Gomes. Parreira did not

have the time to show his ability as a coach of the national team. In his one year with the team it played 14 international games, winning five, drawing seven and losing two, he added.

According to the Brazilian press, the federation has in mind several other candidates, among them formerly noted players-turned-coaches Didi and Eri.

Vladimir McMILLIN

'Golden Goddess' with the Brazilians

The Brazilians again have the "Golden Goddess". True, it is a copy of the Jules Rimet Cup. As is known, the original trophy, after the Brazilian team's victory at the world championships and awarded for good to the Brazilian football association, was stolen last December from its headquarters and melted down into bullion gold by the thieves.

Three captains of the Brazilian team, Bellini, Mauro and Carlos Alberto, world champions of 1958, 1962 and 1970, arrived in West Germany to receive the new "Golden Goddess", made by a West German jewellery company from photos of the original. At an imposing ceremony the trophy was awarded to the Brazilians by the FRG team captain, 1954 world champion Fritz Walter, and Helmut Schön, the coach of the West German football players, who repeated the team's success 20 years later.

Of course, I was for more glad to hold the real "Golden Goddess" in my hands in 1970 but we are still happy to be taking home the new cup. All the Brazilians are waiting for it, Carlos Alberto said at the conclusion of the ceremony.

New start for Formula 1

Frenchman Alain Prost, who dreams of becoming the first French winner of the world Formula 1 auto racing title, has made the first step forward in his dream by winning the first stage of the season — the Brazilian Grand Prix.

This race was very important for me — it inspired me after my failure last year, when I missed getting the champion title by just two points, said Prost, who is now racing for the McLaren team.

Fin Koke Rosberg, who drove a Williams turbo engine, came in second, and Elio de Angelis of Italy, Lotus, came third.

USA VIOLATES OLYMPIC CHARTER

(Continued from page 1)

and the rules of the Charter, which it is written that the Olympic Games constitute a world of peace and goodwill among peoples.

The violations of the Olympic Charter, the anti-Soviet campaign waged by reactionary circles in the USA with the complicity of the US authorities, is noted in the statement, cast an abnormal situation. Under the circumstances, the Soviet National Olympic Committee (NOC) expects to the IOC and the President J. A. Samaranch that the situation existing after the Los Angeles Olympic Games be urgently considered at an emergency meeting of the International Olympic Committee Executive Board and that strict observance be demanded from the American side of the Olympic Charter as well as effective steps to guarantee the safety of Olympic participants and guests.

Vladimir Sainikov's concern

To enter an Olympics is the dream of every athlete. Vladimir Sainikov, Moscow Olympic triple jumping champion and world record holder, told a TASS correspondent.

At present, the world's athletes are preparing for the Games, and so am I, but I am worried by the anti-Soviet hysteria now stirred up in the USA, he said.

One is thus doubtful what all athletes will be allowed necessary conditions, including the Olympic Charter, which the Olympic Charter stipulates that the Olympic Committee should ensure the safety of participants and guests.

There are many violations of the Olympic Charter by the US Olympic organizers. I would like to see the USA, by spending enormous funds for development of new nuclear missiles, failed to find the money for the construction of a safe Olympic Village, thus breaking the tradition of such villages where athletes complete a close-knit family. They will be kept in different places in Los Angeles.

Doubtless, I would like to see the USA put its challenge to the world in a different way. It is not a matter of an Olympic champion but would like to see once again that athletes are worried about reports of the "anti-Olympic" situation arising in Los Angeles.



EDITORIAL BOARD

Address: 16/2 Gorky St. Mayday
Printed in the "Izvestia" Press
Moscow, USSR.
Published Tuesday and Saturday
Indes: 90078.

MN INFORMATION No. 38, 1984

No. 30 (545), April 17-20, 1984

Price 5 kopeks

Reply to 'Krefeld initiative' members

The need to talks on limiting and reducing nuclear arms could be unblocked. For this to be achieved one thing is needed — to end the deployment in Europe of American first-strike missiles and to remove them. This would eliminate the need for our countermeasures, caused by US efforts to upset the regional strategic balance of power.

Chairman of the USSR Council of Ministers Nikolai Tikhonov emphasizes in his reply to an appeal from members of the "Krefeld Initiative" — a broad public movement in West Germany — addressed to the governments of the states-signatories of the Final Act of the Conference on Security and Cooperation in Europe. The authors of the appeal urge action to end the arms race, primarily through an immediate halt to the deployment of missiles.

The Chairman's reply also emphasizes the vital need for reaching mutually acceptable agreement on prevention of the militarization of space, banning chemical weapons and limiting conventional arms. Tikhonov stressed that the USSR was looking forward to receiving an honest and businesslike reply to the proposals it had put forward in Stockholm, Vienna, Geneva and at other forums.



USA. Washington's uncontrolled arms race policy was condemned recently at a massive anti-war demonstration in New York. The demonstrators also objected to the city being turned into a base port for warships carrying nuclear weapons.
Photo by V. Kikilo (TASS)

Security for World Ocean

In reply to the appeal by the 38th session of the UN General Assembly the USSR is prepared to start talks on limiting novel operations, limiting and reducing naval weapons and extending measures of confidence in the seas and oceans especially in areas with the most busy lanes or with the most likely possibility of a conflict arising.

At the same time, the pamphlet represents a White House promise to the American monopolies that it will continue to feed them rich dividends from the Treasury.

Washington also needs this publication in order to intimidate its allies with the "Soviet threat" and in this way to force them to tow the line in the implementation of its militarist plans.

The participants appealed to all nuclear powers to pledge themselves not to be the first to use nuclear weapons, and that agreement be reached on the use of military force to relations between those nations who signed the Final Act of the Conference on Security and Cooperation in Europe.

These relate in particular to entry into the USA of "members of the Olympic family", to the refusal of a visa to the Soviet sports attaché, and to the anti-Soviet and anti-socialist campaign now launched in the USA.

Meret Gramov said the Soviet athletes are preparing for the Games and are naturally anxious to take part in them.

DEEP ANXIETY

Brussels. The heads of 24 European nations and 14 international organizations were present at an expanded session of the International Committee for European Security and Cooperation which took place here recently.

The final communiqué stresses the deep concern of the European peoples over the deterioration to the international situation and, in particular over the deployment in Europe of new nuclear missiles.

The nuclear powers are urged to formulate, and comply with, norms of mutual relations that would envisage renunciation of the use of means of mass destruction.

The participants appealed to all nuclear powers to pledge themselves not to be the first to use nuclear weapons, and that agreement be reached on the use of military force to relations between those nations who signed the Final Act of the Conference on Security and Cooperation in Europe.

'The Washington Post' accusations

Washington. Constantly escalating over the past few months its armed interference in Central America, the Reagan administration, while trying to conceal its real aims in that region, has been brazen to lying to Congress and the American people. This is the conclusion drawn by "The Washington Post" in its analysis of Washington's acts of piracy in Central America.

A little over one year ago, writes the paper, President Reagan assured his compatriots that he was not going to "Americanize" the war in El Salvador. At the time, there were 60 US military advisers there, with another 30 in neighbouring Honduras.

Now there are almost 3 thousand US servicemen in Honduras alone.

A series of "emergency" war games, the paper points out, has made it possible for the Pentagon to train in Honduras thousands of its soldiers for hostilities and to set up a number of military facilities — all this without the sanction of Congress or without the deployment of US troops or for the building of bases. The role and presence of the USA rapidly grow, while we are continually assured that nothing is happening, that this is just routine training," said Congressman M. Barnes, a Maryland Democrat.

USSR for observance of Olympic rules and traditions

We do not aim to boycott the Summer Olympic Games in Los Angeles and believe there should be equal conditions for all going to Los Angeles, said Mariel Gramov, Chairman of the Sports Committee of the USSR and Chairman of the National Olympic Committee of the USSR, addressing a press conference for Soviet and foreign journalists, in Moscow.

He noted that the recent Statement issued by the National Olympic Committee of the USSR which voiced serious concern over the forthcoming Los Angeles Olympic Games had aroused a lot of comment in various countries, most of them agreeing with the Soviet viewpoint.

Our position is clear and unequivocal, he said. We are for the Olympic Games which preserve and closely adhere to the rules of the Olympic Charter and Olympic traditions. The Chairman of the USSR Sports Committee said that IOC Executive Committee will be meeting in Lausanne on April 24 and that the Soviet side and the President of the Los Angeles Olympic Organizing Committee, Peter Ueberroth, will be taking part in order to resolve their problems.

These relate in particular to entry into the USA of "members of the Olympic family", to the refusal of a visa to the Soviet sports attaché, and to the anti-Soviet and anti-socialist campaign now launched in the USA.

Meret Gramov said the Soviet athletes are preparing for the Games and are naturally anxious to take part in them.

PROSECUTION RIGHTS

INVESTIGATION AND PROSECUTION



Lomonosov State University on the Lenin Hills.

HOME NEWS

Round the Soviet Union

FLOOD WATER HAS STARTED TO FILL THE GIANT-STORAGE RESERVOIR ON THE SOLVANKA RIVER, WHICH FORMS A MAJOR LINK IN THE UNITED IRRIGATION SYSTEM NOW IN OPERATION ON THE BORDERS OF KAZAKHSTAN AND THE URALS. The reservoir has a capacity of over twenty million cubic metres which is enough to irrigate several thousand hectares of crop land.

AN ORIGINAL SNOW-WHITE BUILDING, THE NEW HOME FOR THE REGIONAL DRAMA THEATRE, INTEGRATES WELL WITH THE REST OF THE ARCHITECTURE IN GORNO. A TOWN IN BYELORUSSIA. The two theatres in the building can accommodate a total of one thousand spectators. Less than one minute is required to change the scenery.

NORTHERN BAIKAL AND ITS SURROUNDINGS ARE AN IDEAL PLACE FOR HOLIDAYS. This is the conclusion arrived at in a result of a study of the Baikal-Amur railway area carried out by the Siberian Department of the USSR Academy of Sciences. The study has helped Leningrad architects to design recreation and hotel zones here. It is planned to set up a hunting and fishing reserve at the mouth of the Verkhnyaya Angara River, while 250 thousand hectares at the watersides of the Barguzin Range will be turned into a state park.

ALMOND GARDENS HAVE BEEN PLANTED ON PREVIOUSLY BARREN SLOPES OF THE KIRGHIZ MOUNTAIN RANGE IN THE NORTH OF KIRGHIZIA, IN CENTRAL ASIA. In addition to almonds it is thought that the orchards should yield rich harvests since the trees will help retain moisture in the soil as well as the growth of grass.

A REINDEER SHEPHERD'S FESTIVAL HAS TAKEN PLACE IN THE EVENK VILLAGE OF TOPOLNOYE, YERKHOFANSK AREA. It featured reindeer races and athletic games in the snow. Taking part were young men and girls who, on leaving the local secondary school, decided to become reindeer breeders. They appeared to school-leavers in Yakutia to follow suit.

SUN AND EARTH

The coexistence of the Sun and the Earth continues to be mysterious in many respects notwithstanding the present-day advances of science and technology. Hundreds of observations and other research institutions both in the country and abroad keep a watchful eye on the Sun. The Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation, attached to the Siberian Branch of the USSR Academy of Sciences is also very active in this field. From its observatory, situated in the Sayany Mountains, in the Tikhinsk Region, scientists also able to carry out a wide range of solar studies.

The observatory's horizontal telescope, for example, is used to observe the rotation and evolution of the solar corona and the configuration of magnetic fields inside solar spots.

A "solar-male ruzm" is how people often describe the equipment in the possession of the space plasma dynamics lab. It is

used to simulate processes occurring in the solar atmosphere and in interplanetary space, with the aim of acquiring more knowledge about these processes.

Such knowledge is vital because solar processes interfere to a considerable extent with the Earth's weather and radio communications. Solar activity peaks and solar storms, occurring approximately once in ten years, affect many processes on Earth. Scientists have noticed that during these periods the climate changes, volcanoes become more active, nervous diseases, birth rates for a number of animals rise and, some scientists maintain, there is a growth in epidemics.

The majority of equipment used was invented and manufactured in Siberia. Solar magnetograms, for instance, are to be found at many Soviet and foreign observatories. Siberian scientists co-sponsor an international programme in the field of solar-terrestrial physics.



A solar telescope. A radio telescope in the Sayany Mountains. Photos by E. Bryukhonenko (TASS).

MASSIVE PROFITS FOR LATVIAN STUD FARM

50 handsome thoroughbreds made a farewell round of the manege at the Terveta Latvian collective farm. This traditional event closed the auction that had brought the farm quite a good profit.

About thirty state, collective

and stud farms in various republics of the USSR bought the horses. The result of a cross between the local breed of mares and Hanover, Trakhaen and Arab stallions—these bay, black and golden thoroughbreds are noted for their height, strength,

and fine figures. They are mainly used in equestrian sports and for tourism. The stud farm at Terveta set up nearly twenty years ago has become a major profit-making concern. Last year it made about three million roubles.

INCREASED CAPACITY FOR ATOMIC PLANT

The third power unit of the Kursk atomic power plant, in Central European Russia, has reached its designed capacity of one million kilowatts.

Commissioned last October, the unit has already produced over two thousand million kilowatt-hours of power. The plant plays an important role in the shaping of the territorial production complex based on the mineral resources of the Kursk Magnetic Anomaly.

COMPRESSORS FOR PIPELINES

The use of compressors built in Sumy, the Ukraine, will help increase the throughput capacity of pipelines.

The power of each machine has been raised from 10 to 15 thousand kilowatts, while it is ten times lighter in weight. Every day the compressor pumps millions of cubic metres of gas at a pressure of one hundred atmospheres.

CANAL UNDER THE RIVER

The construction of a powerful irrigation complex has been completed in the south of Kirghizia, Central Asia. Its main project, 120-metre-long siphon laid under the capacious Kigirgiz River, has been put into operation. The republic's structure of this type, an underground water conduit, became a link for the entire "multistage" irrigation system.

Flowing along the concrete bed of the canal, water from the Andizhan man-made lake will be supplied to the pumping station which will carry it into the fertile but so far arid plateau. This year, cherries and vineyards will be planted on nearly 1,000 hectares here.

Trilogists of Ten Shan are building projects in complex and mountainous conditions. Economical systems of siphon sprinkling irrigation, overhead pipes to supply water across deep canyons and other technical novelties help enrich lands of the republic with water. By 1985 irrigated areas will be expanded by another 75,000 hectares.

HOME NEWS

Places to visit



Church of Our Saviour at Abramtsevo.

ABRAMTSEVO

The life and work of many famous Russian painters, writers, actors, architects and artists is closely linked to the Moscow region. Abramtsevo was one of the main such cultural centres.

The issue of the estate lying fifty-seven kilometres to the north of Moscow, to the direction of Yaroslavl, began in 1843 when it was purchased by Sergei Aksakov, a writer and man of profound education, a true Russian intellectual. Abramtsevo consists of a one-story house, a garden, a pond, and a birch grove. Instead of being leached oil from the surrounding countryside, the park merges with the forest and meadows. The picturesque local scenery captivated not only the Aksakov family but also their friends. Visitors to the estate included the writer, Ivan Turgenev and the actor, Mikhail Shchepkin. Nikolai Gogol had a permanent room in the attic.

In 1870 (11 years after the death of Sergei Aksakov), the estate was bought by Savva Mamontov, the industrialist, businessman, and art connoisseur. Thus another bright page began in the history of Abramtsevo. Mamontov had the rare gift of discovering and attracting talent. An Abramtsevo art circle was formed aimed at restoring the best national traditions of Russian art, at bringing it closer to the life and customs of the people.

Ilya Repin, Vladimir Serov, Mikhail Vrubel, Viktor Vassnetsov, Isaac Levitov were just some of the leading Russian painters who lived and worked here. The house in which Nikolai Gogol had read "Dead Souls" to the Aksakov family was now the gathering place for Mamontov's friends who argued and quarrelled under Vassnetsov's painting of "A Girl with Peaches", a portrait of the Mamontovs' daughter, Verna. There is a lot of tea here about the old house and park, now a protected monument of historical and literary interest. But is it really to feel the atmosphere of Abramtsevo, and its traditions, one has to go there.

Oleg VISHNYAKOV

Science and technology

ANOTHER WINTER IN ANTARCTICA

Soviet researchers have joined forces with geophysicists from the CDR and Cuba to observe natural phenomena on the Antarctic continent. Over three hundred scientists and experts will spend the winter under the Soviet flag.

Professor Yorgany Karotkevich, in charge of the Soviet Antarctic programme, noted that this round-the-year research now includes the entire complex of sciences devoted to the study of nature in the Arctic and Antarctic—from the ionosphere to the structure of the earth's crust under its armour of ice. He made special mention of the drilling of the ice cap at the Vostok station, the planet's pole of cold, situated at the coldest point on earth. While the well is being drilled, core samples will be taken representing a "frozen chronicle" of the planet's climate over many millennia.

TO THE MYSTERIES OF THE REMOTE STARS

Already for one year, a successful watch has been kept in orbit by the automatic space observatory Astron. On its board operates the biggest orbital ultraviolet telescope. Its length is five metres, and the diameter of the tube is nearly one metre. Coupled with it is a telescope counter which registers X-ray radiation.

The space station has conducted researches of twenty galaxies and supernova stars, quasars, and the galactic background, reports Director of the Crimean Astro-Physical Observatory Academician A. Severny.

commenting on the results of the one-year watch.

One of the last films received from the space communications centre and processed at the computer centre of our observatory shows an anomaly in the chemical composition on one of the stars in the Draco constellation. Among other things was discovered a fairly high composition of lead and tungsten, and one hundred thousand times more uranium than in the solar system.

Important results have been obtained in investigation of the so-called binary stars. Such a long scientific experiment with the automatic observatory in orbit with the highest precision at a distance of two hundred thousand kilometres, from our planet, said in conclusion Academician A. Severny, is conducted for the first time. This has allowed the world science to make a major step in cognition of the fundamental mysteries of the Universe. The light of Astron continues.

OF INTEREST

A museum in a hollow of a tree

The art of folk craftsmen—carvers, embroilers, potters and weavers living in the Uzbek village of Salimb can be seen in a museum that is placed inside a hollow in a tree. It is a rather two-storey thousand-year-old plane tree that grew into each other and formed a protected space of twenty square metres and two metres in height. Once this place was used for a school. Then a folk craft museum was set up under the crown of the tree which remain green until now.

'Spring Gudauri-84'

Winter sports enthusiasts anxious for a late spring break should go to Gudauri, in the Caucasian high-altitude Kazbegi District, in Georgia. Located at the 1200 m of the Military Highway, Gudauri compares well to the world's best winter resorts. Relax at its comfortable hotel situated at 2,200 metres above sea level, and breathe in the bracing mountain air from the cable cars. All skiing equipment can be hired locally. By 1990, there will be a hotel complex at Gudauri capable of accommodating some six to eight thousand people at a time. The first ever competitions to be held on the slopes of the Greater Caucasus developed into a major winter sports festival which became known as the "Spring Gudauri-84".

VIEWPOINT

The Baikal-Amur Railway: a year ahead of schedule

Leonid KORENEV, economic observer

On November 7, 1984, when this country celebrates the 67th anniversary of the Great October Socialist Revolution, the last links will be joined in the railway track running from the centre of Eastern Siberia in the Pacific coast. This, in turn, will mean that the through traffic along the Railway same as whose sections are already in operation, will be opened a year ahead of the planned deadline. This commissioning a year before schedule will be of great significance not only for the builders themselves, whom one can quite understand, but also for the entire Soviet economy.

What is the reason? Why does the construction of a railway which is not the longest either in the world or in the Soviet Union itself make part of the most major socio-economic programmes of the Soviet Union?

In order to understand this, one has to take a look at the map. Siberia is one of the main raw material pantries of the planet. It has everything ranging from coal, oil, and gas to iron and copper, in gold and diamonds. The reserves of the fuel-and-energy resources alone are estimated here at almost one-third of the world's at a time when geologically the hovers of Siberia have not been prospected in much enough detail. It is not for nothing that the Soviet Union links with the further development of Siberia its main economic prospects for the end of the 20th century and the beginning of the 21st.

However, the territory of Siberia is insufficiently provided with transport routes without which the development at the thousand kilometre expanses is simply impossible.

The Siberian rivers—the Ob, the Yenisei, and the Lena—cross this region almost strictly south of north. The Northern Sea Route lies along its coast from Murmansk in Magadan in the Far East.

Southern Siberia is crossed by the Trans-Siberian Railway, which since the beginning of the century has reliably and honestly been serving the economic development of Siberia.

Thus, there are two latitudinal lines of communications which encompass Siberia, and the rivers which link them along the vertical lines.

However, today, they are not enough in order to ensure a further development of the area.

Additional latitudinal railways were needed, since the entire many-year Siberian experience has confirmed that this is the most reliable and all-weather type of transport in the severe climatic conditions of Siberia.

Indeed, the Railway in itself means involvement in the economic sphere of additional 1.5 million square kilometres. The Railway is also another exit for Siberia to the Pacific, as the port of Vostochny, which in the future is to become the biggest in this country, is turning into its oceanic gateway. Finally, the Railway increases the transport capacity of the most powerful continental bridge between Europe and Japan via Siberia.

All this taken together gives a powerful new impetus to the economic development of Siberia and, as a consequence, of the Soviet Union as a whole.

FROM the SOVIET PRESS

MAN IN SPACE — AN ANACHRONISM?

Twenty-three years after the world's first space flight made by Yuri Gagarin, manned spacecrafts and orbiting complexes have become routine and benefited various branches of science and economy. The success of automatic space probes is so impressive that it makes one wonder whether manned space flights will not soon become an anachronism.

This is the subject of an article in IZVESTIYA GIZETA by Academician V. Avdeyevsky.

Humans have always been and will remain the main creative power in science, he writes. No instrument, no advanced computer will ever be able to substitute for the intelligence, senses and intuition of the human being.

The human eye has the unique ability of "sensing" the slightest change and is perfectly suited to highly discriminative recognition of various images. It is the human brain that can identify the most important components in a stream of information most efficiently. Without human participation, geophysical, astrophysical, technological, medical-biological and many other types of research would be impossible. As for the instruments, computers, and electronic processing of experimental data, they are required to make man even smarter.

In the future the orbiting stations will be turned into space complexes offering many conveniences and consisting of research, production, industrial and medical zones. Their crews will engage in research, controlling, repairing and adjusting, as needed, the numerous automatic machines controlling space flights from the ground.

Even today, controlling space flights from the ground is cumbersome. The time is not far off when a flight control centre will be located in space. Equipped with advanced computers, it will be capable of controlling

the operations of all automatic stations in orbit. Such an independent space complex will inevitably have its own navigation and power generation facilities and will be equipped for multiple landing and change of crews. All these tasks which are quite inalienable cannot, however, be resolved without human participation. I do not think humans will ever leave space now, the Academician concludes.

LASER TREATS PEOPLE

Ever since the birth of lasers doctors, especially surgeons, have shown much interest in using these devices to treat various ailments, writes PRAVDA. This is explained by the nature of the laser beam, which is able to dissect tissue while simultaneously stop bleeding, make the wound's surface airtight and vaporize diseased tissues.

The paper notes that laser medicine in the USSR has made big gains, with important contributions from the progress of optics and electronics, which helped develop a family of medical lasers enjoying wide acceptance abroad. They are used for diverse purposes, the paper notes. The qualities of the laser beam make possible its use also in plastic surgery and cosmetology.

THE COAL OF EKIBASTUZ

The Ekibastuz coal basin in south-western Siberia provides roughly one in four tonnes of coal shipped annually in the Soviet Union, writes the NAIKA IZHIZN (Science and Life) magazine. In the current five-year period (1981-1985) Ekibastuz will yield nearly 400,000,000 tonnes of coal, nearly half the amount to come from the Bogotyr quarry, its annual production capacity of 50,000,000 is unrivalled in the entire world. The coal of Ekibastuz, the magazine points out, is noted for its hardness, with its rock seams often being as hard as granite. New processes have been introduced

for the first time here to achieve high efficiency using rotor excavators. First, a coal block is exploded without damage to its structure and then excavators go to work.

The world's two most powerful rotor complexes producing 5,000 cu m of coal an hour work at the Bogotyr quarry. In other words, each of them in only one hour produces an amount of medium-capacity mine does in one day.

EXHIBITION IN 2000

The Exhibition of Economic Achievements of the USSR, which acquaints its many visitors with the economic, scientific, technological, social and cultural development of the USSR, will have its image markedly changed in the next decade, writes TRUD.

Apart from the reconstruction of many buildings already familiar to many people, on both sides from the main entrance will spring up the new pavilions, "Moscow—capital of the USSR", "Construction", "Cosmos", "Industry", and "Transport". The plans are to create large open exposition grounds and to build a new information centre and a House of Symposia.

The draft master plan for the exhibition reconstruction and development now being formulated, says a special emphasis on the development of the transportation network around the exhibition. It is no secret that the small motor trains now running around the grounds can hardly meet the needs of all the visitors, which is why the draft plan calls for the creation of a monorail road, the paper points out.

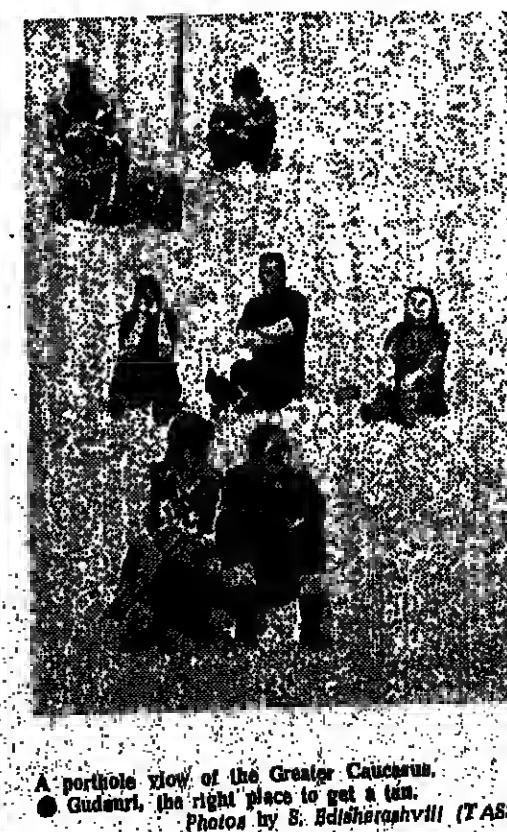
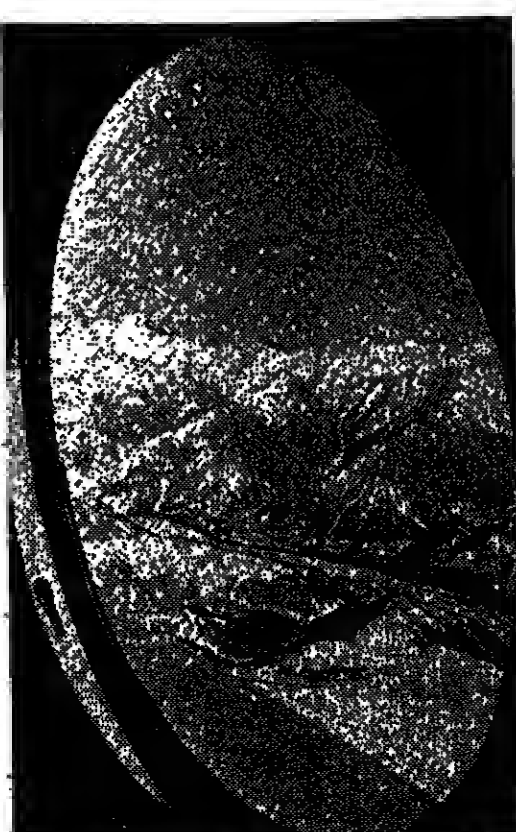
Another transportation novelty contained in the draft is a moving sidewalk. Built on both sides of the Central Alley—from the main entrance to the Central Pavilion—such sidewalks will help quickly cover a forty-forgo stretch of the route. Last but not least, a cable road for the exhibition is also on the drawing board.

The ancients also built with tufa

Tufa, as a building stone, was used in the ancient state of China. Evidence of this is at the unknown monument discovered within the city limits of Yerevan, the capital of the Armenian republic.

Excavator-operator V. Davtyan during digging operations found an entrance to a 40-metre underground room with an area of nearly two square metres. It turned out that the walls of the room were made with heavy tufa blocks. The floor was paved with the same material, and even the ceiling had tufa beams.

This is the first monument of the 7th century B.C. discovered on the territory of the Armenia. Ceramic vessels were also preserved covered with the tufa and objects of red glass—cups—a long sword, a belt, and a sword tip. The find has confirmed the high level of the Urartu culture. It has also allowed to supplement the information about the level of the development of the production in the Urartu state.



A portfolio view of the Greater Caucasus. Gudauri, the right place to get a tan. Photos by S. Balshayev (TASS).

ENTERTAINMENT

PROFILES

VALERY LANTRATOV



While still a student at the Moscow ballet school Valery Lantratov was noted for his slole-minded approach to his future career of ballet dancer. From his very first steps at the Slatiavsky and Nostrovich-Danchenko Musical Theatre, it was clear to an experienced observer that he was a gifted dancer.

Audiences took to him at once, having memorized his pastiche, swift movements, absorption, his captivating emotionality and artistry. When Lantratov dances, the theatre is automatically filled to overflowing.

During the seven years he has been with the company, he has travelled the road from member of the corps de ballet to leading roles. Lantratov has had to face more than a few difficulties in the course of his career and that he has attained his present position is due solely to his talent, to his tremendous capacity for work, to his ability for creative thinking.

Lantratov's individuality was shown off to good advantage in Nikolai Sidelkov's ballet "Simpas Razin". The great breadth of Razin's personality, his place to history and his ultimate fate intrigued the dancer. I am happy I've danced this, he says. A wonderful character! Cold and passionate at the same time, he combined ruthless ferocity with an unswerving sense of justice, unbridled cruelty with compassion for the people's misfortunes.

According to Alexei Chicholadze, the theatre's chief choreographer, "to this ballet Valery Lantratov gives full value to his star quality as a young virtuoso". Lantratov's individual approach to the image of Razin was as striking as Chicholadze's staged another version of his production especially far him.

The last season was a particularly busy one for Lantratov: he danced Armino to Khachaturian's "Gayane-sultu", he gave a dynamic and madon interpretation of the role of Peachum, the gang leader to "Boomerang" by McLaughlin, choreographed by Boris Elman after Brecht's "Threepenny Opera", Franz la Delibes' "Coppelia"; Bazile in "Don Quixote" by Minus, a part every dancer dreams of, but one which few tackle successfully.

Lantratov's approach to famous roles is always original, avoiding alien plasticity, his characters are inevitably realistic, true to life and easily recognizable. His work on the stage of character begins long before he appears on stage. Perhaps it is the way Lantratov manages to inject his dancing with the impressions he derives from everyday life that explains the three-dimensional depth and humanity of his interpretations.

My favourite parts are Stepan Razin and Bazile, says the dancer. One can always find new traits in them, one can work forever on the dramatic interpretation of the image. And, this I believe, is the main thing.

Boldness, great sense of purpose and thoughtfulness, a powerful temperament, plus carefully modeled dance. These are but some of Lantratov's distinguishing traits as a ballet dancer. As for his interests, he is keen on music, literature and driving. Great vitality and perseverance — such are the characteristics forming the keynote of his personality and defining his relationship both to his life and to art.

Valery YEROFEEVA

In the photo: Valery Lantratov dancing the Prince in Prokofiev's ballet, "Cinderella".

Music of Finland

A delegation of the Union of Finnish Composers was recently in Moscow. At the All-Union Composers House a concert was held with great success, featuring works by noted musicians.

At the Composers House there was a "round-table" meeting where Soviet and Finnish colleagues discussed the problems of contacts and creative exchange in the musical field.

The meeting was very fruitful.

Rustaveli in Esperanto

The Georgian Melanlyereba Publishers have put out a book of quotations from the 12th-century classic poem, "The Man in the Panther's Skin", by Shota Rustaveli — in both Georgian and Esperanto. The book is supplied with a Georgian-Esperanto glossary.

The translation has been done by Zurab Mahashvili, research associate of the Botanical Gardens of Tbilisi, whose hobby is the study of the Slav and pre-Slavonic languages as well as Esperanto.

Zurab Mahashvili, who is a member of the Esperanto Association recently set up in Georgia, has also translated Esperanto poems by the Georgian poet, Nikolai Rustaveli. He is now working on a translation of a Georgian collection of poetry.



Between April 19 and 29, many towns and cities in the communist and autonomous republics of the Soviet Union will be holding Days of Polish Culture dedicated to the 40th anniversary of the liberation of the Polish People's Republic. Taking part will be many performers and leading companies — among them Miroslaw Radowski (photo), a popular Polish variety singer.

BUSINESS

British Technical Week in Moscow

More than 30 leading firms from Britain participated in the British Technical Week, held at Moscow's International Trade Centre. It was sponsored by the London Chamber of Commerce and Industry and the British Overseas Trade Board in collaboration with the USSR Chamber of Commerce and Industry and the USSR State Committee for Science and Technology.

Such famous firms as Shell, British Petroleum, ICI, John Brown and others acquainted Soviet experts with their scientific and technical achievements. Other participants in the Week were smaller companies which are taking their first steps in the promotion of trade with the Soviet Union. The subjects of the Week included something new in the technology of such branches as chemistry and petrochemistry, power engineering and instrument-making. Great attention was also paid to the automation of industrial production.

During the Week views were exchanged between British and Soviet experts. The guests from Britain gave special lectures on a wide range of industrial and technological problems.

Many British firms participating in the Week maintain trade

contacts with Soviet foreign trade organizations. Last year Britain supplied the USSR with some types of equipment for the West Siberian gas pipeline, as well as for such branches as power engineering and agriculture. As a result of scientific and technological cooperation new equipment was developed on the basis of both countries' achievements. Thus, Soviet and British experts developed an automatic coal cutter-loader to operate in hard rock, which has no equal in the world.

USSR-Austria: cultural relations developing

Over the past week a government delegation from Austria visited this country at the invitation of the Copyright Agency (VIAAP) of the USSR to discuss problems relating to an intergovernmental agreement in this field. The agreement was reached and became operative last year, the first one between the USSR and a Western country.

Reinhold Dirlich, one of the most authoritative international legal experts who led the delegation told MNI the following.

Our contacts are successfully developing. We between certain publishers in the two countries having become traditional. Over the past few years the USSR put out a great number of works by modern Austrian authors in Russian translation while the interest towards Austrian music grows in the USSR too. New Austrian compositions will be performed later this year at the Second International Musical Festival in Moscow.

The Austrian public comes to know ever more Soviet literature, drama, music and art.

The number of contracts for publishing Soviet authors in Austria grows every year, said Nikolai Voshchinskiy, Deputy Chairman of the Copyright Agency (VIAAP) of the USSR. The Austrian publishers take an active part in international book fairs held in the USSR.

The latest one that took place in 1983 featured a large Austrian exposition.

Natalya ROSNITSKAYA

Fruitful ties with ENI

Nearly 24 thousand million dollars is the sum of the turnover last year between the Soviet foreign trade organizations and the Italian concern ENI. This was reported by the head of the office of the Italian concern to Moscow M. Reali. He said that the concern last year bought from the Soviet Union energy carriers, oil products, and other goods, delivering in its own equipment for gas pipelines and for chemical, petrochemical and textile industries. Taking part in the business co-

operation with the Soviet Union were practically all the firms which form part of ENI, including Agip, Snam, Nuove Pininfarina, Savio and Enichem.

This year, declared M. Reali, we intend to expand the cooperation with the Soviet partners in all the directions. Such are, for example, increases in the purchases of Soviet goods, and our participation in the construction of a coal-carrying pipeline in the Soviet Union, and development of the continental shelf of the Barents Sea.

New Soviet export item

Refrigerators, TV sets, radio receivers, air conditioners and other durable goods of Soviet make have become popular in the market of the Federal Republic of Germany.

The impression is that before us nobody paid attention to this item of imports from the USSR, Ewald Tilmann, a spokesman of the GEWIKO company, told an MNI correspondent. To start with, we bought 20,000 Birsu refrigerators and a consignment of small-size TV sets. All refrigerators were sold out rather quickly. Not long ago we signed a contract with V/O Tekhnimport for the delivery of over 10,000 Soviet radio receivers.

The company was set up by the well-known twins concerned specifically to expand trade transactions with the USSR. It was supplied the USSR with plenty of machines and equipment for the food, woodworking, furniture and cement industries. It actively cooperates with Soviet partners in machine-tool making and automobile construction industries. E. U. Mair, Deputy Director-General of the concern and chairman of the GEWIKO council, who arrived in our capital, said that the purchases of Soviet goods would, probably, be expanded.

There is a lot in your country to buy, said Herr Mair. I went to the exhibition of goods put out by the local industry. There were so many good things on display — castles with paintings, chinaware, the famous Khokhlova. I think that a third of the exhibits could be bought. They are made with great taste.

Have there been any reclamations? asked the MNI correspondent.

None, so far, replied E. Mair.

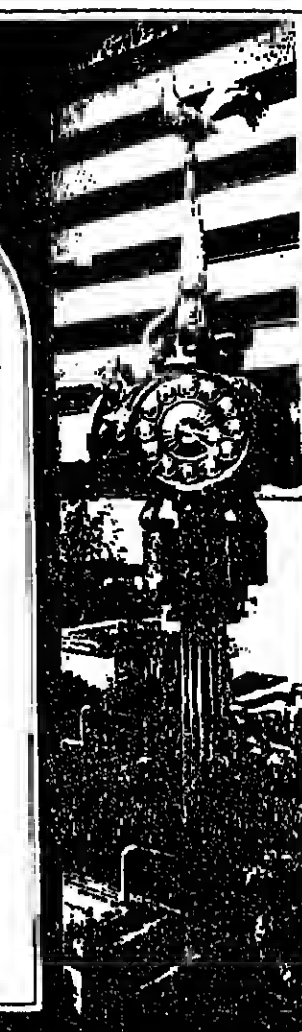
SOVINCENTR

V/O SOVINCENTR
WORLD TRADE CENTER
CONGRESS HALL

April 19, 20, 21
at 8.00 p.m.

Alla
PUGACHOVA
sings

Reservation of tickets
at WTC service bureau
Tel. 253-27-00
253-27-03
Payment in hard currency



KONEISTO NORGE EXPANDS OPERATIONS

Koneisto Norge sells Soviet machine tools and industrial equipment in Norway.

The first Soviet machine tools sold in Norway some 20 years ago are still going strong, noted the company's director Ojan Orjans. The excellent reputation enjoyed by Soviet machine tools has enabled us to sell over 3,000 of them to date in Norway. Soviet tools account for five per cent of Norway's versatile machine-tool imports. 20 per cent of the machine tools at Norwegian vocational training schools are manufactured in the USSR.

Starting out by trading in machine tools, the firm has managed to diversify the assortment of Soviet goods it sells in Norway. Now it does a successful trade in forge and press equipment, measuring, cutting and bench and direction assembly tools, electric motors, generators, and equipment for the shipping.

mining and woodworking industries. The firm's scope of operations is growing, and it now represents ten Soviet foreign trade associations in Norway accounting for over one-third of Soviet-Norwegian trade.

Via Koneisto Norge the USSR buys from Norway paper, viscose cellulose, ships and on-board equipment, timber, and crystal silicon. Soviet-Norwegian cooperation in the opening up of the oil fields on the Barents Sea shelf, holds out a lot of promise for the company.

At present Koneisto Norge is selling Soviet high technology to Norway. Two Norwegian companies have bought a couple of IR-800 digital control processing centres made by the Ivanovo machine-tool construction association. The machine tools are already in operation and interest is being shown in them by many other Norwegian companies.

Contacts and contracts

A regular meeting held in Moscow by the CMEA Committee on Cooperation in Material and Technical Supplies has examined the questions of further deepening of cooperation between the member-countries in economic, scientific and technical use of the local and energy and raw material resources, and has adopted long-term programmes for cooperation in production.

Philately



lating the material and technical supplies and development of the warehouse industry.

The third meeting of the Working Group on Energy and Electrification attached to the Soviet-Austrian Mixed Commission on Economic, Scientific and Technological Cooperation has taken place in Vienna. Discussed were issues of mutual power supplies and the results were considered of operating joint power systems as well as possible expansion of mutual supplies and services in power construction.

The Soviet MI-8 helicopter, used on the most complicated sections of power transmission lines and at major industrial construction sites, is proving a reliable ally to Bulgarian builders. It also delivers concrete, large-size structures and help assemblyman in their work.

As a result of the Soviet-Pakistan talks which were held in Moscow, a protocol was signed on mutual deliveries in 1984 of goods, along with other documents which regulate trade relations between the two countries. Among the goods exported from the USSR to Pakistan there will be machinery and equipment and some raw materials.

FACTS AND EVENTS

Exhibitions. An exhibition of paintings drawn from the collection of the Hermitage Museum in Leningrad and the Pushkin Museum of Fine Arts in Moscow, has opened in Tokyo. On display are 63 works by Picasso, Guggenheim, Matisse, Cezanne and other major West European artists.

Awards. A group of Afghan workers in culture and the arts have been presented with the 1983 Soviet-Afghan Friendship Prize in Moscow. These prizes

are awarded to the best works of literature, music, art, theatre, cinema and journalism, reflecting the progressive transformations taking place in Afghanistan and promoting peace and Soviet-Afghan friendship.

Books. The Mongolian State Publishers have issued a two-volume collection entitled "Soviet Poetry" in a large number of copies. It includes poems by Blok, Tsvetayeva, Vinokurov and Voznesensky, as well as works by leading poets from the Soviet constituent republics. The translations are made by well-known Mongolian poets and translators.

ART ENCYCLOPAEDIA FOR ALL TASTES

The "Popular Encyclopedia of Art" shortly to be published in this country is aimed at a wide range of readers. It will cover the fine, applied and decorative arts as well as the architecture of all epochs and peoples. There will be colour plates of masterpieces from the collections of the world's largest museums and art galleries — the Hermitage, Musée du Louvre, Musée du Prado, the Dresden and the Tretyakov galleries.

SONGS OF RUSSIA



A performance by the Ryazan Folk Choir. Photo by Andrei Stepanov

The final round of the All-Russian Revival of Folk Chorus continues at the Tchaikovsky Concert Hall in Moscow. The participating eleven companies include the Siberian, Chirchik, Northern, Kutan, Don Cossacks and others. The oldest company — the Pyshtalsky Russian Folk Choir, will perform solo-competition in the closing ceremony on April 22. The Muscovites and the guests of the capital will see the performances of professional Russian folk choruses representing the vocal, choreographic and instrumental folk art from various regions of Russia.

This review, says Composer Valentin Levanov, Art Director of the Pyshtalsky Choir, is of great interest. We shall be able to see the work of our colleagues, exchange ideas, work out the guidelines in the development of our folk art.

WHAT'S ON?

April 17-20

THEATRES

Bolshoi Theatre (Sverdlov Sq.). 17 — Prokofiev, "Ivan the Terrible" (ballet). 18 — Verdi, "La Traviata" (opera). 19 — A concert by Polish artists. 20 — Verdi, "Un ballo in maschera" (opera).

Stanislavsky and Nemirovich-Danchenko Musical Theatre (17 Pushkinskaya St.). 17 — Pugnol, Gilels, Vasilenko, "Esmeralda" (ballet). 18 — Offenbach, "La belle Helene" (opera). 19 — An evening of one act ballets. 20 — Rimsky-Korsakov, "May Night" (opera).

Operetta Theatre (6 Pushkinskaya St.). 17, 18 — Strauss, "Die Fledermaus". 19 — Dym, "A Composition on the Theme of Love". 20 — Kalman, "The Gypsy Princess".

Variety Theatre (20/2 Bersenevskaya St.). 17 — A two-part variety performance, featuring Yegor Petro-

syen, winner of the all-Union competition of variety performers. 18 — An evening of Vadim Ruzanov, RSFSR People's Artist, accompanied by the Spontiki ensemble.

Olimpiyskiy Sports Complex (Prospect Mira). 20 — "A Day of the Gypsy", a performance by the Leningrad Music Hall.

FILMS

A Sudden Leak (Dovzhenko Film Studios, USSR).

About the courageous and dangerous profession of a mine-rescue. The film takes place in a mine where a sudden leak of gas occurs.

Operetta Theatre (6 Pushkinskaya St.). 17, 18 — Strauss, "Die Fledermaus". 19 — Dym, "A Composition on the Theme of Love". 20 — Kalman, "The Gypsy Princess".

CONCERT HALLS

Variety Theatre (20/2 Bersenevskaya St.). 17 — A two-part variety performance, featuring Yegor Petro-

EXHIBITIONS

Central Artists Club (10/14 Lyubimskaya Embankment). About 700 works by artists from Tajikistan, paintings, sculpture, drawings, and theatre decor, as well as items of applied and folk art are on display. Daily, except Monday, 11 a.m. to 6 p.m. Metro Park Kultury. Trolleybus 10.

Bakhmish Theatre Museum (122 Bakhmish St.). An exhibition marking the 175th anniversary of the great Russian writer, Nikolai Gogol. Daily, except Tuesday, noon to 7 p.m. Wednesday and Friday, 2 p.m. to 5 p.m. Metro Pervolotskaya.

WEATHER

April 17-20

Warm weather without showers is expected. Night temperatures of 1°, 6° and of 16°, 20° during the day at the beginning of the period (12°, 16° later).

SW and W wind.

The Southern Hemisphere is in the depths of autumn. Sharp weather changes are characteristic for this time of the year here just as they are for the Northern Hemisphere in spring. A twenty-degree rise in temperature was recorded at the Vostok station in Antarctica where temperatures now stand at 62° and cloudy weather with snow has replaced the previously clear skies.

ICB HOCKEY

Palace of Sport (Luzhniki). 17 — Central Army Club, ye-

Moscow Spartak. 18 — Moscow Dynamo vs. Novosibirsk Sibir. 6.45 p.m. (both days).

Spartak and Dynamo are vying for silver medals in the USSR championships.

FOOTBALL

Torpedo Stadium (4 Vostochnaya St.). 18 — International friendly meeting. USSR vs. Czechoslovakia. 7 p.m.

RACING

Hippodrome (22 Begovaya St.). 18, 20 — Racing and trotting. 6 p.m. (both days).

WEATHER

April 17-20

Warm weather without showers is expected. Night temperatures of 1°, 6° and of 16°, 20° during the day at the beginning of the period (12°, 16° later).

SW and W wind.

The Southern Hemisphere is in the depths of autumn. Sharp weather changes are characteristic for this time of the year here just as they are for the Northern Hemisphere in spring. A twenty-degree rise in temperature was recorded at the Vostok station in Antarctica where temperatures now stand at 62° and cloudy weather with snow has replaced the previously clear skies.

ICB HOCKEY

Palace of Sport (Luzhniki). 17 — Central Army Club, ye-

Cooperation in outer space

The USSR Ministry of Communications has issued a three-stamp series and a souvenir sheet to mark the Soviet-Indian cooperation in outer space with the framework of the intercosmos programme. One stamp shows joint meteorological research in outer space, another — space geodesy, and the last one — Indian satellites lifted up by Soviet rockets. The souvenir sheet shows the joint Soviet-Indian crew at work aboard the Salyut-7 station. The stamps cost 5, 20 and 45 kopeks, and the sheet 30 kopeks.